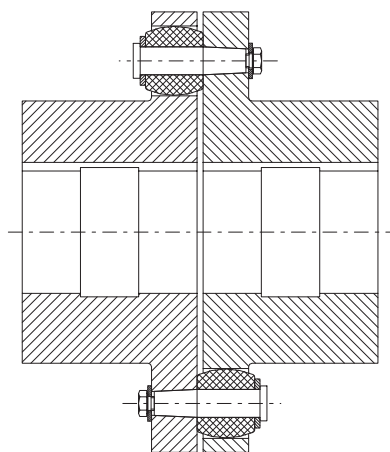


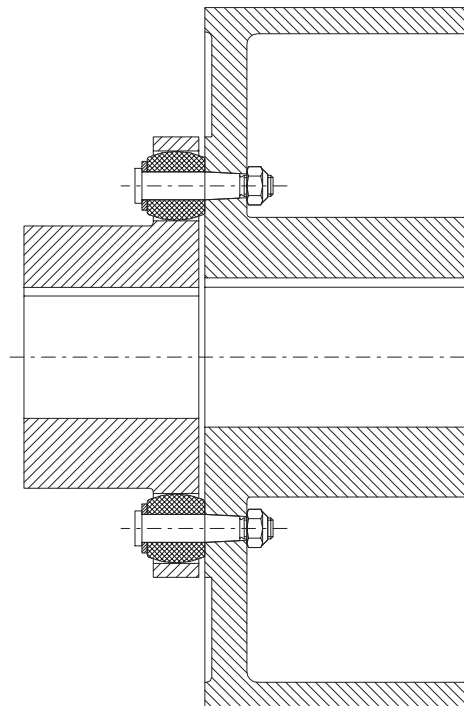
Operating Instructions

BA 3600 EN 08.98

Flexible **RUPEX** couplings,
type **RWN**, **RWS** and **RWB**, **RBS**



RWN
RWS



RWB
RBS

FLENDER

1.	Technical data	4
1.1	Validity of the nominal torques T_{KN}	4
1.2	Types RWN and RWS	4
1.3	Types RWB and RBS	6
2.	General notes	7
2.1	General	7
3.	Safety notes	8
3.1	Safety notes	8
3.1.1	Notes and symbols in the operating instructions	8
4.	Handling and storage	9
4.1	Scope of supply	9
4.2	Handling	9
4.3	Storage	9
4.3.1	Storage of the coupling parts	9
4.3.2	Storage of the buffers	9
4.3.2.1	General	9
4.3.2.2	Storage room	9
5.	Technical description	10
5.1	General description	10
6.	Assembly	11
6.1	Notes on fitting the finished bore, the axial securing, the set screws, the balancing	11
6.1.1	Finished bore	11
6.1.1.1	Keyway	12
6.1.2	Axial securing	12
6.1.3	Set screws	12
6.1.4	Balancing	13
6.2	General installation notes	13
6.3	Mounting the coupling parts	14
6.4	Aligning	14
6.5	Possible misalignments	15
6.5.1	Axial misalignment	15
6.5.2	Angular misalignment	15
6.5.3	Radial misalignment	15
6.6	Assignments of the tightening torques	16
7.	Startup	16
7.1	Measures before startup	16
8.	Operation	17
8.1	General operating data	17
9.	Disturbances, reasons and remedy	17
9.1	General	17
9.2	Possible malfunctions	17

10.	Maintenance and repair	18
10.1	General	18
10.2	Change of wear parts	18
11.	Spare parts stock, service facility addresses	19
11.1	Service facility addresses	19
12.	Declaration by the manufacturer	24

1. Technical data

1.1 Validity of the nominal torques T_{KN}

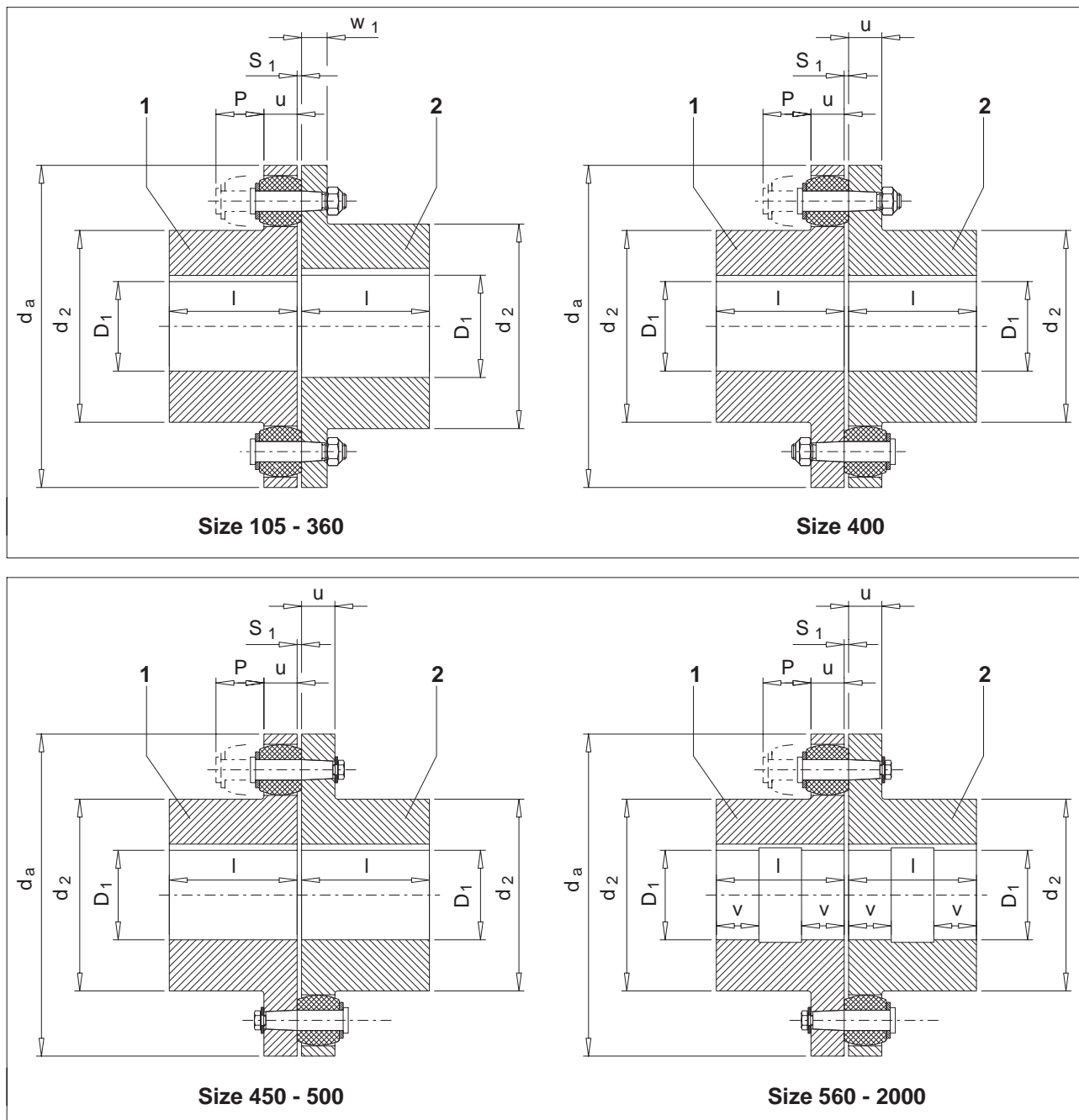
Validity of nominal torques T_{KN} (with original RUPEX buffer of buna N, hardness 80 Shore **only**):

- daily operating cycle up to 24 h
- during the starting process or during operation, torque impulses up to the triple nominal torque are allowed up to 25 times per hour.
- Operation within the prescribed alignment
- Operation in the temperature range from $-30\text{ }^{\circ}\text{C}$ to $+80\text{ }^{\circ}\text{C}$ (ambient temperature or temperature of the shaft ends).

Caution!

For permanent trouble-free operation, the coupling has to be designed with a service factor appropriate to the respective application. When changing the operating conditions (performance, speed, changes on power engine and machine), a check of the design is absolutely necessary.

1.2 Types RWN and RWS



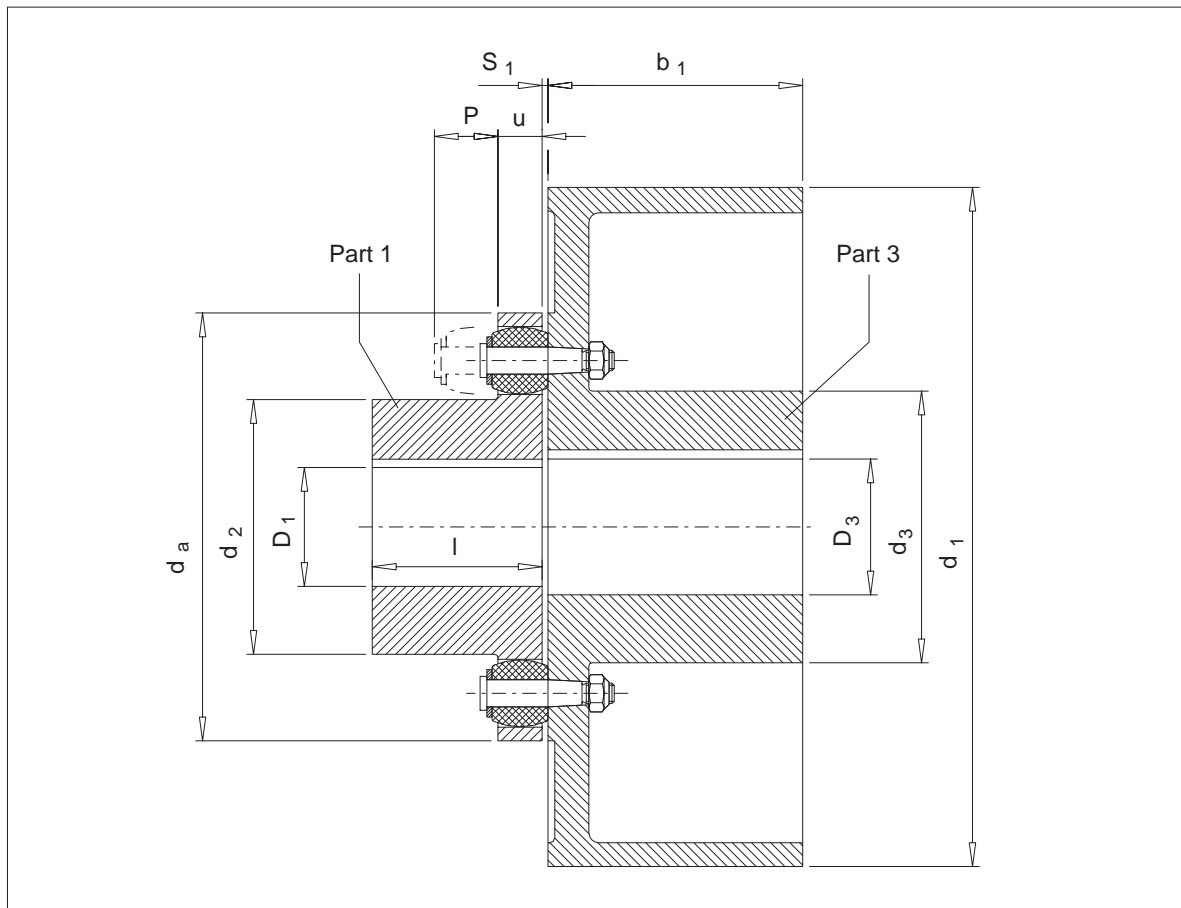
FLENDER

Size	Nominal torque T _{KN} 1) Nm	Speed n _{max}		Bore					d _a mm			l mm	v mm	P mm	S ₁ mm	w ₁ mm	u mm	Weight 2)			
		RWN 1/min	RWS 1/min	from D _{1/2} mm	to		RWN D ₁ mm	RWS D ₂ mm		RWN								RWS			
								Part 1		Part 2	Part 1							Part 2			
																			kg	kg	kg
105	200	5000	5000	10	32	38	32	38	105	53	59	45		30	2... 4	12	13	0.8	1	0.9	1.1
125	350	5000	5000	14	40	48	40	48	125	65	68	50		35	2... 4	15	16	1.4	1.5	1.5	1.6
144	500	4900	5000	18	45	55	50	60	144	76	84	55		35	2... 4	15	16	1.9	2.6	2.1	2.8
162	750	4300	5000	22	50	60	55	65	162	85	92	60		40	2... 5	18	20	2.8	3.9	3	4.2
178	950	3800	4900	24	60	70	780	75	178	102	108	70		40	2... 5	18	20	4.1	5.6	4.4	6.1
198	1300	3400	4600	28	70	80	80	85	198	120	128	80		40	2... 5	18	20	5.9	7	6.4	7.6
228	2200	3000	4400	28	80	90	85	95	228	129	140	90		50	2... 5	24	26	7.3	11.5	7.9	12.5
252	2750	2700	4200	38	90	100	100	110	252	150	160	100		50	2... 5	24	26	10.5	15.5	11.5	16.5
285	4300	2400	3900	48	100	110	110	120	285	164	175	110		60	3... 6	30	32	16	23	17.5	25
320	5500	2100	3500	55	110	120	125	130	320	180	192	125		60	3... 6	30	32	23	30	25	32
360	7800	1900	3100	65	120	130	135	140	360	200	210	140		75	3... 6	42	42	32	46	35	50
400	12500	1700	2800	75	140	140	150	150	400	230	230	160		75	3... 6		42	53	53	57	57
450	18500	1500	2500	85	160	160	170	170	450	260	260	180		90	4... 7		52	78	78	84	84
500	25000	1350	2200	95	180	180	190	190	500	290	290	200		90	4... 7		52	99	99	105	105
560	39000	1200	2000	> 100	140	140	165	165	560	250	250	220	70	120	4... 8		68	140	140	150	150
				140	180	180	200	200		300	300							145	145	155	155
				> 180	200	200	210	210		320	320							145	145	155	155
630	52000	1050	1800	> 100	140	140	165	165	630	250	250	240	80	120	4... 8		68	175	175	190	190
				140	180	180	200	200		300	300							185	185	200	200
				> 180	220	220	235	246		355	355							200	200	215	215
710	84000	950	1600	> 110	160	160	190	190	710	290	290	260	80	140	5... 9		80	255	255	275	275
				160	200	200	220	220		330	330							260	260	280	280
				> 200	240	240	250	250		385	385							270	270	290	290
800	110000	850	1400	> 125	180	180	210	210	800	320	320	290	90	140	5... 9		80	330	330	360	360
				180	220	220	240	240		360	360							350	350	380	380
				> 220	260	260	280	280		420	420							360	360	390	390
900	150000	750	1250	> 140	180	180	210	210	900	320	320	320	100	160	5...10		90	450	450	490	490
				180	220	220	240	240		360	360							450	450	490	490
				> 220	260	260	280	280		425	425							480	480	520	520
				> 260	290	290	310	310		465	465							510	510	550	550
1000	195000	680	1100	> 150	200	200	230	230	1000	355	355	350	110	160	5...10		90	560	560	610	610
				200	240	240	260	260		395	395							580	580	630	630
				> 240	280	280	300	300		460	460							630	630	680	680
				> 280	320	320	340	340		515	515							660	660	710	710
1120	270000	600	1000	> 160	200	200	240	240	1120	360	360	380	120	180	6...11		100	730	730	790	790
				200	250	250	270	270		410	410							750	750	810	810
				> 250	300	300	330	330		495	495							800	800	870	870
				> 300	350	350	370	370		560	560							840	840	910	910
1250	345000	550	900	> 180	230	230	270	270	1250	410	410	420	130	180	6...11		100	920	920	1000	1000
				230	280	280	300	300		460	460							950	950	1050	1050
				> 280	330	330	360	360		540	540							1000	1000	1050	1050
				> 330	380	380	400	400		610	610							1100	1100	1150	1150
1400	530000	490	800	> 200	260	260	310	310	1400	465	465	480	145	210	6...12		120	1400	1400	1500	1500
				260	320	320	350	350		525	525							1450	1450	1550	1550
				> 320	380	380	410	410		620	620							1550	1550	1650	1650
				> 380	440	440	460	460		700	700							1650	1650	1750	1750
1600	750000	430	700	> 260	320	320	370	370	1600	565	565	540	165	210	6...12		120	1900	1900	2050	2050
				320	380	380	410	410		625	625							1950	1950	2100	2100
				> 380	440	440	480	480		720	720							2050	2050	2200	2200
				> 440	480	480	510	510		770	770							2150	2150	2300	2300
1800	975000	380	600	> 320	380	380	440	440	1800	660	660	600	185	240	8...16		140	2750	2750	3000	3000
				380	440	440	480	480		720	720							2800	2800	3050	3050
				> 440	500	500	540	540		820	820							3000	3000	3250	3250
				> 500	540	540	580	580		870	870							3150	3150	3400	3400
2000	1300000	340	550	> 380	440	440	500	500	2000	760	760	660	200	240	8...16		140	3400	3400	3700	3700
				440	500	500	540	540		820	820							3500	3500	3800	3800
				> 500	560	560	610	610		920	920							3700	3700	4000	4000
				> 560	600	600	640	640		960	960							3800	3800	4100	4100

Table 1.1: Torques T_{KN} , speeds n_{max} , weights and sizes of type RWN and RWS

- 1) Observe the validity of the nominal torques T_{KN} according to 1.1!
- 2) Weights are valid for max. bores.

1.3 Types RWB and RBS



Size	Nominal torque	Speed	Bore					d _a	d ₂	d ₃	l	u	P	S ₁	d ₁	b ₁	Weight 2)						
	T _{KN} 1)	n _{max}	from	to			RWB										RBS		RWB		RBS		
				D _{1/3} mm	D ₁ mm	D ₃ mm	D ₁ mm										D ₃ mm	Part 1 kg	Part 3 kg	Part 1 kg	Part 3 kg		
Nm	1/min	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	kg	kg	kg				
144	500	3400	18	45	55	50	60	144	76	84	55	16	35	2... 4	200	75	1.9	6.6	2.1	7.1			
162	750	2750	22	50	60	55	65	162	85	92	60	20	40	2... 5	250	95	2.8	13	3	14			
178	950	2750	24	60	70	70	75	178	102	108	70	20	40	2... 5			4.1	13.5	4.4	14.5			
198	1300	2750	28	70	80	80	85	198	120	128	80	20	40	2... 5			5.9	15	6.4	16			
178	950	2150	24	60	70	70	75	178	102	108	70	20	40	2... 5	315	118	4.1	21	4.4	22.5			
198	1300	2150	28	70	80	80	85	198	120	128	80	20	40	2... 5			5.9	22.5	6.4	24.5			
228	2200	1700	28	80	90	85	95	228	129	140	90	26	50	2... 5	400	150	7.3	41	7.9	44			
252	2750	1700	38	90	100	100	110	252	150	160	100	26	50	2... 5			10.5	46	11.5	50			
252	2750	1400	38	90	100	100	110	252	150	160	100	26	50	2... 5	500	190	10.5	74	11.5	80			
285	4300	1400	48	100	110	110	120	285	164	175	110	32	60	3... 6			16	79	17.5	86			
285	4300	1100	48	100	110	110	120	285	164	175	110	32	60	3... 6	630	236	16	130	17.5	140			
320	5500	1100	55	110	120	125	130	320	180	192	125	32	60	3... 6			23	135	25	145			
360	7800	1100	65	120	130	135	140	360	200	210	140	42	75	3... 6			32	145	35	155			
320	5500	950	55	110	120	125	130	320	180	192	125	32	60	3... 6	710	265	23	180	25	195			

Table 1.1: Torques T_{KN} , speeds n_{max} , weights and sizes of type RWB and RBS

- 1) Observe the validity of the nominal torques T_{KN} according to 1.1!
- 2) Weights are valid for max. bores.

2. General notes

2.1 General

These Operating Instructions constitute part of the coupling shipment and should be kept in the immediate vicinity of the coupling at all times.

Only a precise knowledge of the Operating Instructions will ensure trouble-free operation of the coupling. It is therefore in the interest of our customer that the operating instructions are read, understood and observed in all respects by the persons responsible for handling, installation and operation.

Note: We accept no liability for any damage or malfunction resulting from non-observance of the operating instructions.

The "**coupling**" dealt with in these operating instructions was developed for stationary use in general engineering.

The coupling is only designed for the field of application as specified in Section 1 "Technical data". Operating conditions which differ from the stated will require fresh contractual agreements.

The coupling described here is in accordance with the state of the art at the time of these operating instructions go into print.

In the interest of further development, we reserve the right to introduce modifications which, while retaining the essential features, can be regarded as desirable to increase its efficiency and safety.

The copyright of these Operating Instructions remains the property of **FLENDER AG**.

These operating instructions may not be duplicated in part or whole, utilized for the purpose of publicity or communicated to third parties without our expressed consent.

Please contact our works listed below in respect of all technical queries.

FLENDER AG
D 46393 Bocholt

Telephone: 02871/92-2800
Telefax: 02871/92-2801

or one of our service branches which are listed in Section 11 "Stocking spare parts, service facility addresses".

3. Safety notes

3.1 Safety notes

- The coupling is constructed in accordance with the state of the art and is reliable in the condition as shipped. Unauthorized modifications which impair its reliability are not permissible. This also applies to guards which are fitted as protection against accidental contact.
- The coupling may only be used and operated within the scope of the condition specified in the contract of performance and supply.
- The customer should ensure that the persons entrusted with installation, operation, care and maintenance as well as repair have read and understood the operating instructions and observe them in all respects in order to:
 - prevent hazard to life and limb of the user and third parties
 - ensure the reliability of the coupling

and

- prevent failure and environmental pollution due to incorrect handling.
- The relevant regulations concerning industrial safety and pollution control should be observed during handling, installation, operation as well as care and maintenance.
- The coupling may only be operated, serviced and repaired by authorized, trained and properly instructed personnel.
- All work should be carried out with care with the safety aspect in mind.
- All work on the coupling may only be carried out when it is stationary.
The coupling must be secured to prevent accidental start up (e.g. by locking the key switch or by removing the fuses and the power supply). A notice should be displayed at the switch-on point stating that work is in progress on the coupling.
- The drive unit should be shut off at once if changes in the coupling are detected during operation, such as e.g. changed running noises.
- The coupling must be protected by means of suitable guards to prevent accidental contact.
- During installation of the coupling in units or systems, the manufacturer of the units or systems is obliged to incorporate the requirements, notes and descriptions contained in these operating instructions in his own operating instructions.

3.1.1 Notes and symbols in the operating instructions

Instructions in the operating instructions which concern operating safety are emphasized as follows:



This symbol draws attention to safety measures which must be observed to prevent **personal injury**.

Caution!

This symbol draws attention to safety measures which must be observed to prevent **damage to the coupling**.

Note:

This note draws attention to general **operating notes** which should be especially observed.

4. Handling and storage

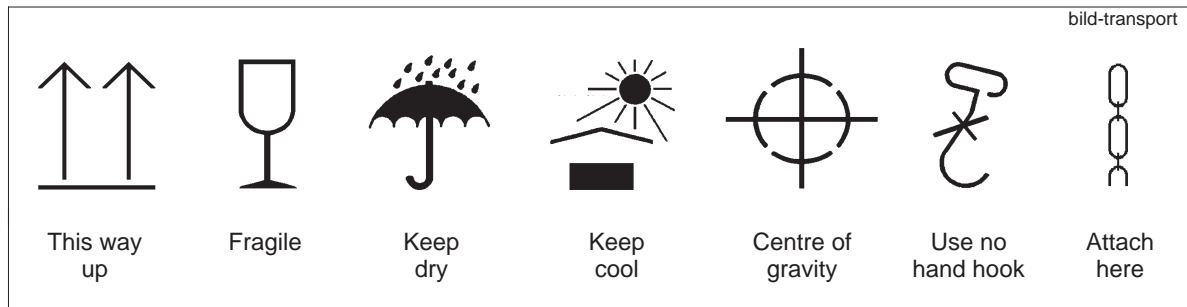
4.1 Scope of supply

The scope of the shipment is listed in the shipping documents. They should be checked for completeness on receipt. Any shipping damage and/or missing parts should be reported in writing at once. After consulting FLENDER an expert is to be called in.

4.2 Handling

The packing of the coupling will differ depending on method of shipment and size. The packing, unless otherwise agreed contractually, complies with **HPE Packing Guidelines**.

The symbols shown on the packing should be noted. Their meaning is as follows:



Caution!

Make sure that suitable hoists are used.

4.3 Storage

4.3.1 Storage of the coupling parts

The coupling is delivered in a preserved state and can be stored at a covered dry place up to 6 months. If the coupling shall be stored for a longer period of time, an appropriate long-term preservation is necessary (consultation with FLENDER required).

Caution!

Before cleaning the coupling parts and applying the long-term preservation, the buffers are to be removed.

4.3.2 Storage of the buffers

4.3.2.1 General

Properly stored buffers keep their characteristics for up to 5 years. Unfavourable storage conditions and improper treatment of the buffers result in a negative change of the physical characteristics. These changes can be caused by the effects of e.g. ozone, extreme temperatures, light, moisture or solvents.

4.3.2.2 Storage room

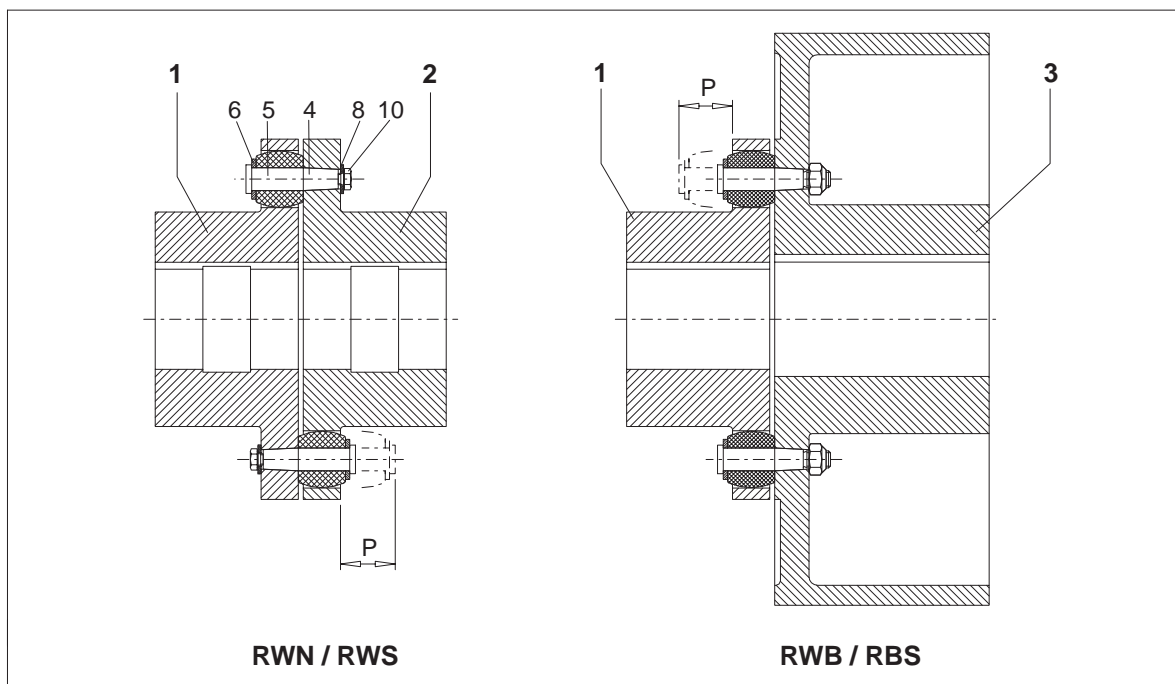
The storage room should be dry and dust-free. The buffers must not be stored together with chemicals, solvents, fuels, acids, etc. Furthermore, they should be protected against light, especially against direct sun light and strong artificial light with a high ultra-violet percentage.

Caution!

The storage rooms must not contain any ozone-producing devices like e.g. fluorescent light sources, mercury-vapour lamps, electric high-voltage devices. Damp storage rooms are unsuitable. Make sure that no condensation develops. The relative humidity of air is most favourable below 65 %.

5. Technical description

5.1 General description



The RUPEX coupling type RWN and RWS consists of two coupling parts and the pins with the flexible plastic buffers required for torque transmission. In the RWN version, the hub parts (1 and 2) are of grey cast iron. In the RWS version, they are of steel.

The RUPEX coupling type RWB and RBS consists of a coupling part and a brake drum, with the pins and flexible plastic buffers required for torque transmission. In the RWB version, the hub part (1) and the brake drum (3) are of grey cast iron. In the RBS version, they are of steel.

Up to size 360, the ground steel pins are attached to the buffers only in the coupling part (2) (RWN and RWS) or the brake drum (3) (RWB and RBS). From size 400 they are attached alternately in the coupling parts (1 and 2). In the assembled state, the buffers engage the buffer bores of the counterpart.

The flexible plastic buffers of buna N have a hardness of 80 Shore. Buffers of differing material quality and/or hardness are available within limits. With regard to the availability of these special buffers and the extent to which the properties of the coupling are affected, please consult FLENDER.

6. Assembly


6.1 Notes on fitting the finished bore, the axial securing, the set screws, the balancing

6.1.1 Finished bore

- Remove buffers.
- Remove the anti-corrosion agent from coupling parts



Observe manufacturer's instructions on handling solvents.

When fitting the finished bore, align the parts carefully. For the permissible radial and axial excentricity see DIN ISO 286 degree of fundamental tolerance IT8. The location of the parts () is to be carried out on the marked surfaces.

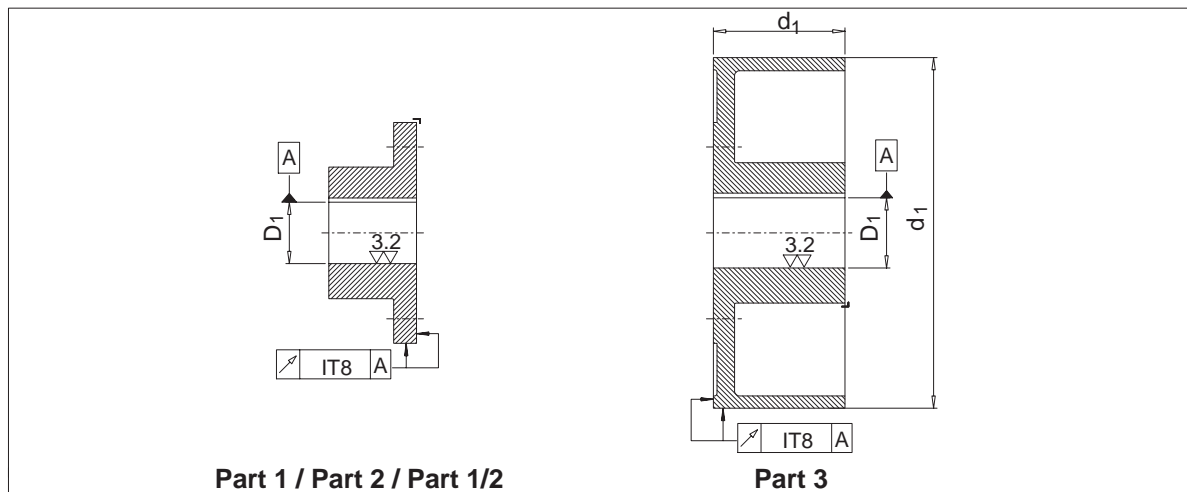
Caution!

The maximum permissible boring diameters (see Section 1.) are designed for driving connections without tightening according to DIN 6885/1 and must not be exceeded in any case.

If other shaft hub connections (e.g. splined hub profile, tapered or graded bore, driving connection with tightening, etc.) shall be fitted instead of the intended driving connections, FLENDER is to be consulted.



**Non-observance of these notes may lead to the drifting of coupling.
There is a danger to life due to broken pieces flying around!**



In case of drive by means of parallel keys, the following fit pairings are prescribed for the bores:

Fit selection	Bore		Shaft tolerances	Boring tolerances
	above mm	to mm		
Shaft tolerance to FLENDER standard		25	k6	H7
	25	100	m6	
	100		n6	
Shaft tolerance to DIN 748/1		50	k6	H7
	50		m6	
Unified system shaft		50	h6	K7
	50			M7
		all	h8	N7

Table 6.1: Fit pairings

Caution!

Observing the fit correspondance is absolutely necessary, on the one hand in order to keep low the backlash in the shaft hub connection or, on the other hand, to keep the hub tension caused by the overdimension within the permissible load depending on the use of the tolerance fields. It cannot be excluded, that the shaft hub connection is endangered when the fit correspondance is not observed.



**Non-observance of these notes may lead to the bursting of the coupling.
There is a danger to life due to broken pieces flying around!**

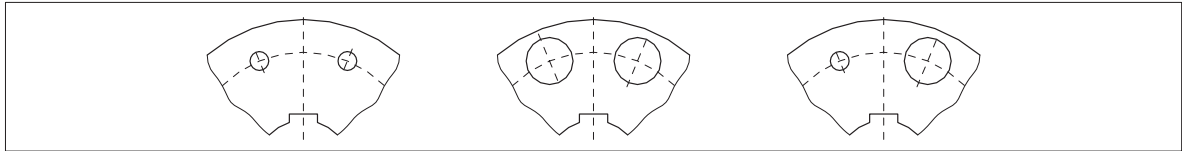
6.1.1.1 Keyway

The keyways have to be designed according to the existing parallel keys. For keyways, the tolerance field of the hub keyway width **ISO JS 9** is to be observed.

For more difficult operating conditions, as it is the case for e.g. reversing operation of operation with impulses, the tolerance field of the hub keyway width **ISO P9** is prescribed.

Caution!

The keyways are to be set and centered between the buffer bores.



6.1.2 Axial securing

For axially securing the coupling parts, a set screw or an end plate has to be provided for. When using end plates, FLENDER is to be consulted with regard to the insertion of recess in the coupling parts.

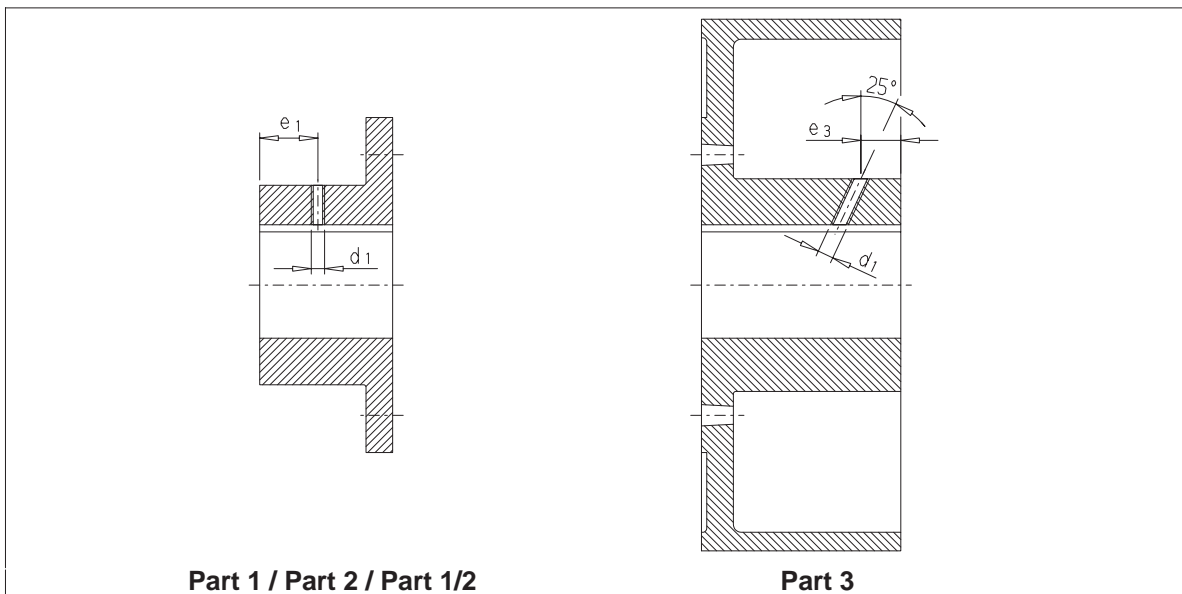
6.1.3 Set screws

Headless pins with notched cut point according to DIN 916 are to be used as set screws.

It is absolutely necessary to observe the following guidelines!



The length of the set screw is to be chosen so that it completely fills the cut hole but that it does not protect over the hub ($L_{\min} = d_1 \times 1.2$).



Type RWN			Type RWS		
Bore range		Set screw size	Bore range		Set screw size
above mm	to mm	d_1 mm	above mm	to mm	d_1 mm
8	30	M 6	8	30	M 6
30	38	M 8	30	75	M 8
38	65	M10	75	95	M12
65	95	M12	95	110	M16
95	110	M16	110	150	M20
110	150	M20	150	230	M24
150	230	M24	230	600	M30
230	600	M30			

Table 6.2: Set screw assignment

Size	105	125	144	162	178	198	228	252	285	320	360	400	450
Distance dimension e_1	15	20	25	25	35	40	40	50	55	60	70	80	80
Size	500	560	630	710	800	900	1000	1120	1250	1400	1600	1800	2000
Distance dimension e_1	90	100	110	130	115	160	175	160	200	240	250	300	330

Break drum	200 x 75	250 x 95	315 x 118	400 x 150	500 x 190	630 x 236	710 x 265
Distance dimension e_3	12	12	25	30	50	75	90

Tabelle 6.3: Distance dimensions of the set screws

Caution!

Generally, the set screws are to be arranged on the keyway. This does not apply to coupling parts 1+2 of sizes 105 and 125 where the set screw should be arranged by 180° shifted to the keyway.

6.1.4 Balancing

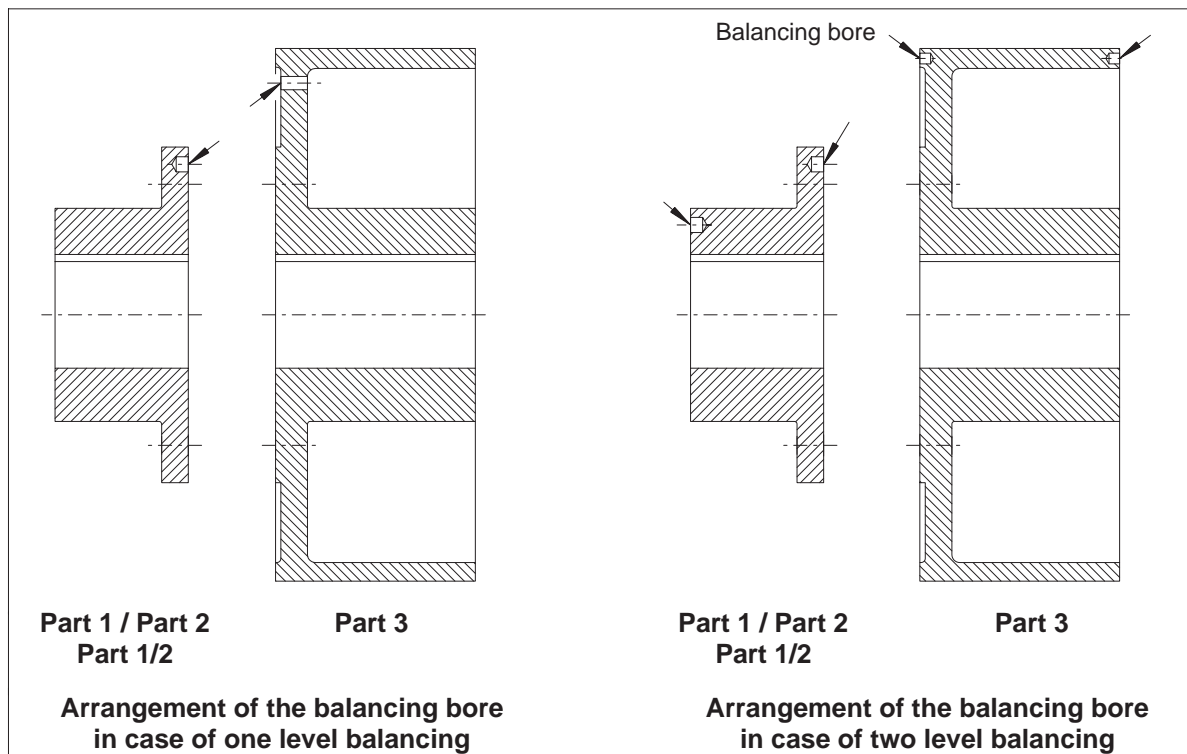
Prebored couplings resp. prebored coupling parts are shipped unbalanced. For these parts it is recommended to balance them depending on the application case after finish boring (see also DIN 740, VDI guideline 2060).

Balancing is usually carried out by material cutting through boring. In order to restrict the material quantity to be cut to a minimum, the biggest possible balancing radius is to be selected.

Caution!

For parts 1/2, cutting has to be carried out between the bores without through-boring of the bottom. For part 32, the break surface must not be damaged under any circumstances.

Finished bored couplings or coupling parts are balanced according to the instructions of the ordering party.



6.2 General installation notes

For the installation the safety notes in Section 3. are to be observed.

The installation has to be carried out with utmost care by trained personnel.

Already during the planning phase it is to be observed that sufficient room is to be provided for the installation and later inspection and maintenance work.

Before starting the installation a sufficient number of hoists must be provided for.

6.3 Mounting the coupling parts

Before starting the assembly, clean the shaft ends, the brake drum and the coupling parts carefully. Before cleaning the coupling parts with solvents, remove the buffers.



Observe the manufacturer's instructions on handling the solvents.

Caution!

The coupling parts and the brake drum are to be fitted by means of suitable devices in order to prevent damage to the shaft bearing arrangement by the axial fitting force.

Make sure that suitable hoists are used.

If it shall be possible to exchange the buffers or to move the coupled machines, the dimension P should be taken into consideration during assembly according to 6.6.

Caution!

Tightening of the set screws only by means of a hexagon socket head wrench according to DIN 911, without an extension pipe.



Non-observance of these notes may lead to the burrstrng of the coupling. There is danger to life due to broken pieces flying around!

The assembly process is made easier by heating the coupling parts and the brake drum (3) (to max. +150 °C). If using temperatures greater than +80 °C, the buffers/bolts must be removed from the coupling parts before heating them.



Protect yourself against burns by hot parts!

After mounting the coupling parts or the brake drum, replace the buffers (if removed beforehand). Tighten the nuts (7) and bolts (11) using a torque wrench (for correct torques, see section 6.6). Secure bolts (11) with a few spots of adhesive (e.g. Loctite, type 242). Coupling parts which have been previously heated must be allowed to cool to a temperature of less than 80 °C.

Loop together the machines to be coupled.



Danger of squeezing!

Observe the dimension S_1 (see Section 1.).

6.4 Aligning

The couplings compensate for positional variations of the shaft ends to be connected up to the data shown under item 6.5.

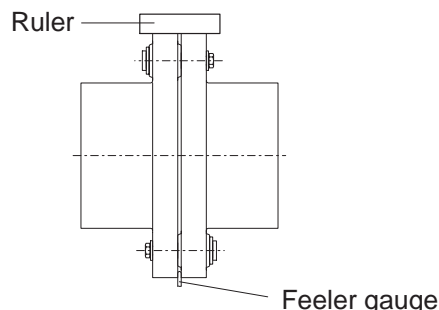
When aligning, keep the radial and angular misalignment of the shaft ends as small as possible because hereby the service life of the flexible is increased under otherwise the same operating conditions.

The alignment should be realised in the order:

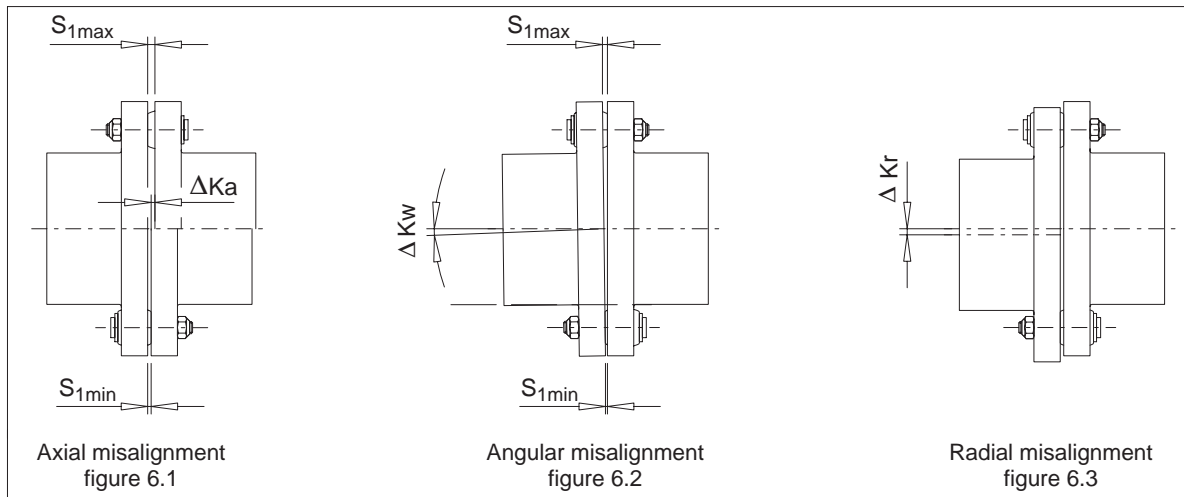
1. angular alignment
2. radial alignment

and should be carried out in two axial planes vertical to each other. This is possible by means of a feeler gauge (angular misalignment) and a ruler (radial misalignment). The distance dimension S_1 is to be kept (see Section 1.).

By using a dial gauge, the alignment precision can be increased.



6.5 Possible misalignments



Misalignments of the coupling parts may result from an inexact alignment during the assembly but also from the operation of the plant (expansion due to heat, bending of the shaft, machine frame too soft, etc.).

Caution!

The following max. permissible misalignments must not be exceeded during operation under any circumstances.

6.5.1 Axial misalignment

Axial misalignment ΔK_a (figure 6.1) of the coupling parts to each other is permissible within the "permissible variation" for the dimension S_1 (see Section 1.).

6.5.2 Angular misalignment

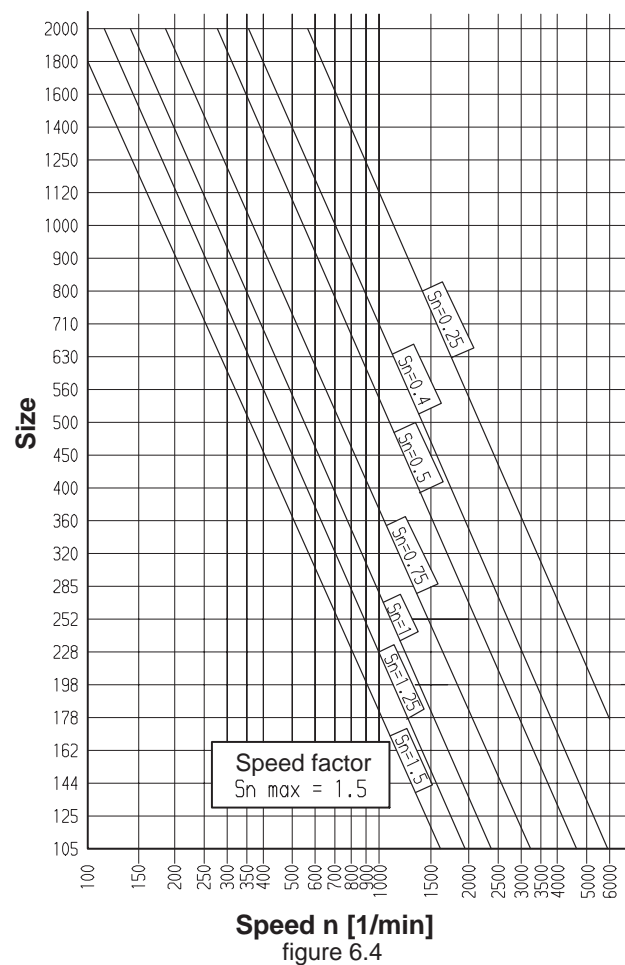
The permissible angular misalignment ΔK_w (figure 6.2) has to be determined taking into consideration the speed factor S_n of figure 6.4.
 $\Delta K_{wperm.} = S_{1max} - S_{1min} = 0.00175 \times da \times S_n$
 da = Coupling size

6.5.3 Radial misalignment

The permissible radial misalignment ΔK_r (figure 6.3) has to be determined taking into consideration the speed factor S_n of figure 6.4.

$$\Delta K_{rperm.} = 0.00175 \times da \times S_n$$

da = Coupling size



Caution!

Angular and radial misalignments may occur at the same time. The sum of both misalignments must not exceed the max. permissible value of the angular or radial misalignment.
 $(K_w + K_r)_{existing} \leq \Delta K_w \times S_n \text{ or } \Delta K_r \times S_n$

6.6 Assignments of the tightening torques

Size	P mm	Tightening torque T_A Nm	Wrench width S_w mm
105	30	12	10
125	35	30	13
144	35	30	13
162	40	60	17
178	40	60	17
198	40	60	17
228	50	65	19
252	50	65	19
285	60	150	24
320	60	150	24
360	75	220	27
400	75	220	27
450	90	180	24
500	90	180	24
560	120	340	30
630	120	340	30
710	140	580	36
800	140	580	36
900	160	600	36
1000	160	600	36
1120	180	1150	46
1250	180	1150	46
1400	210	1150	46
1600	210	1150	46
1800	240	2000	55
2000	240	2000	55

Table 6.4: Assignments of the tightening torques

7. Startup

7.1 Measures before startup

Before startup, check the tightening of the set screws, the alignment and the distance dimension S_1 and correct if necessary and check all screw connections for the prescribed tightening torques (see Section 1. and Section 6.). Finally, the coupling guard to prevent accidental contact is to be fixed.

8. Operation

8.1 General operating data

During operation, the coupling should be checked for:

- any changes in running noises
- sudden shaking.

Caution!

If irregularities are detected during operation, the drive assembly should be set off immediately. The cause of the malfunction should be determined with the aid of the Troubleshooting Table (Section 9.).

The Troubleshooting Table lists possible malfunctions, their causes and suggestions for remedying them.

If the cause cannot be determined or there is no facility for repair with suitable equipment, we recommend calling in one of our service fitters (see Section 11.).

9. Disturbances, reasons and remedy

9.1 General

The malfunctions listed below can only be hints for a troubleshooting.

In case of a complex plant, all other components have always to be included in the troubleshooting.

The coupling has to run with low noise and without shaking in all operating phases. Any deviating behaviour is to be regarded as malfunction and should be repaired immediately.



Before maintenance work, repairs or other work, the operator should make sure that the whole drive train is stationary. Especially the drive motors are to be secured against accidental start up.

Futhermore, we refer to the relevant regulations on the prevention of accidents at the place of installation.

9.2 Possible malfunctions

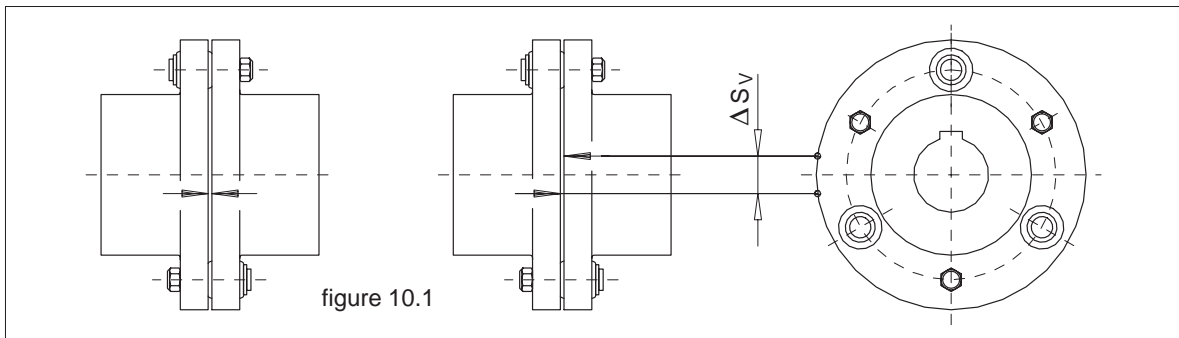
Malfunctions	Causes	Remedy
Sudden change of the noise level and/or sudden shaking	Change of alignment	Shut down the plant possibly repair the reason for the change of alignment (e.g. fasten loose foundation bolts)
	Buffers worn, no dampening	Shut down the plant Disassemble coupling and remove the rests of the buffers Check coupling parts and exchange damaged coupling parts Buffers are to be changed in sets Check alignment and correct if necessary, see Section 6. Assembly of coupling acc. to Section 6. "Assembly" and Section 7. "Start up".

10. Maintenance and repair

10.1 General

The circumferential backlash between the two coupling parts should be checked according to the maintenance intervals, however, at least once a year. As far as an increased backlash of the coupling is not detrimental to the operation of the coupling, the elastic buffers may remain in use until a defined wear limit is reached before they should be changed. For evaluating the wear, in Table 10.1, the permissible circumferential backlash is listed, which is converted to the chord dimension ΔS_V on the outer coupling diameter. In order to determine the dimension ΔS_V , a coupling part is turned until stop without torque and a mark is made on the coupling part (see figure 10.1). By turning the coupling part in the opposite direction of rotation until stop, the marks move apart. The distance between the marks is the chord dimension ΔS_V . If the dimension ΔS_V exceeds the value listed in Table 10.1, the buffers should be changed.

Caution! The buffers should be changed in sets.



Size	105	125	162	228	285	360	450	560	710	900	1120	1400	1800
		144	198	252	320	400	500	630	800	1000	1250	1600	2000
ΔS_V	3.0	3.5	4.0	4.5	6.0	7.0	8.5	10.0	12.0	13.5	15.0	18.0	20.0

Table 10.1: Wear mark

10.2 Change of wear parts

Only use original **RUPEX** buffers as spare buffers, in order to guarantee a perfect transmission of the torque and a trouble-free function.

Note: Changing the buffers is possible without moving the coupled machines.

Up to coupling size 400, the bolts with the plastic buffers can be removed through the buffer holes after releasing and removing the nuts, and up to coupling size 450, after releasing and removing the hexagon bolts and end plates.

After renewing the plastic buffers, assemble the unit in the opposite sequence. Secure the nuts or bolts with adhesive (e.g. Loctite 242).

Carefully observe the instructions of Section 6. "Installation" and Section 7. "Start up" for the re-installation.

11. Spare parts stock, service facility addresses

Maintaining a stock of the most essential spare and wear parts is an important prerequisite for the permanent service ability of the coupling.

When ordering spare parts, the following data should be stated:

- Part No. (see Section 5.)
- Description / Size (the size designation corresponds to the outer diameter d_a in mm)
- Quantity

We assume warranty only for original spare parts supplied by us.

Caution!

We would expressly draw attention to the fact that spare parts and accessories not supplied by us have not been tested or approved by us either. Fitting and/or use of such products can therefore under certain circumstances adversely affect structurally specified properties of the coupling and will thus impair active and/or passive safety. No form of reliability or warranty will be assumed by FLENDER for damage occasioned by use of non-original spare parts and accessories.

Please note that production and supply specifications frequently exist for components and we will always offer spare parts in accordance with the state of the art and in accordance with the latest legal requirements.

11.1 Service facility addresses

When ordering spare parts or requesting a service fitter, please contact FLENDER AG first of all.

FLENDER Germany

A. FRIEDR. FLENDER AG

46393 Bocholt - Tel.: (0 28 71) 92-0 - Fax: (0 28 71) 92 25 96
E-mail: contact@flender.com • www.flender.com
Shipping address: Alfred - Flender - Strasse 77 - 46395 Bocholt

A. FRIEDR. FLENDER AG - Kupplungswerk Mussum

Industriepark Bocholt - Schlavenhorst 100 - 46395 Bocholt - Tel.: (0 28 71) 92 28 68 - Fax: (0 28 71) 92 25 79
E-mail: couplings@flender.com • www.flender.com

A. FRIEDR. FLENDER AG - Werk Friedrichsfeld

Am Industriepark 2 - 46562 Voerde - Tel.: (0 28 71) 92-0 - Fax: (0 28 71) 92 25 96
E-mail: contact@flender.com • www.flender.com

A. FRIEDR. FLENDER AG - Getriebewerk Penig

Thierbacher Strasse 24 - 09322 Penig - Tel.: (03 73 81) 60 - Fax: (03 73 81) 8 02 86
E-mail: ute.tappert@flender.com • www.flender.com

FLENDER - TÜBINGEN GMBH

72007 Tübingen - Tel.: (0 70 71) 7 07-0 - Fax: (0 70 71) 70 74 00
E-mail: sales-motox@flender-motox.com • www.flender.com
Shipping address: Bahnhofstrasse 40 - 72072 Tübingen

LOHER GMBH

94095 Ruhstorf - Tel.: (0 85 31) 3 90 - Fax: (0 85 31) 3 94 37
E-mail: info@loher.de • www.loher.de
Shipping address: Hans-Loher-Strasse 32 - 94099 Ruhstorf

FLENDER SERVICE GMBH

44607 Herne - Tel.: (0 23 23) 940-0 - Fax: (0 23 23) 940 333
E-mail: infos@flender-service.com • www.flender-service.com
24h Service Hotline +49 (0) 17 22 81 01 00
Shipping address: Südstrasse 111 - 44625 Herne

A. FRIEDR. FLENDER AG - FLENDER GUSS

Obere Hauptstrasse 228-230 - 09228 Chemnitz / Wittgensdorf - Tel.: (0 37 22) 64-0 - Fax: (0 37 22) 64 21 89
E-mail: flender.guss@flender-guss.com • www.flender-guss.de

Germany

A. FRIEDR. FLENDER AG

46393 BOCHOLT - TEL.: (0 28 71) 92 - 0 - FAX: (0 28 71) 92 25 96

SHIPPING ADDRESS: ALFRED - FLENDER - STRASSE 77 - 46395 BOCHOLT

E-mail: contact@flender.com • www.flender.com

VERTRIEBSZENTRUM BOCHOLT

46393 Bocholt
Alfred-Flender-Strasse 77, 46395 Bocholt
Tel.: (0 28 71) 92 - 0
Fax: (0 28 71) 92 - 14 35
E-mail: vz.bocholt@flender.com

VERTRIEBSZENTRUM STUTTART

70472 Stuttgart
Frielzheimer Strasse 3, 70499 Stuttgart
Tel.: (07 11) 7 80 54 - 51
Fax: (07 11) 7 80 54 - 50
E-mail: vz.stuttgart@flender.com

VERTRIEBSZENTRUM MÜNCHEN

85750 Karlsfeld
Liebigstrasse 14, 85757 Karlsfeld
Tel.: (0 81 31) 90 03 - 0
Fax: (0 81 31) 90 03 - 33
E-mail: vz.muenchen@flender.com

VERTRIEBSZENTRUM BERLIN

Schlossallee 8, 13156 Berlin
Tel.: (0 30) 91 42 50 58
Fax: (0 30) 47 48 79 30
E-mail: vz.berlin@flender.com

EUROPE

AUSTRIA

Flender Ges.m.b.H.
Industriezentrum Nö-Süd
Strasse 4, Objekt 14, Postfach 132
2355 Wiener Neudorf
Phone: +43 (0) 22 36 6 45 70
Fax: +43 (0) 22 36 6 45 70 10
E-mail: office@flender.at
www.flender.at

BELGIUM & LUXEMBOURG

N.V. Flender Belge S.A.
Cyriel Buyssestraat 130
1800 Vilvoorde
Phone: +32 (0) 2 - 2 53 10 30
Fax: +32 (0) 2 - 2 53 09 66
E-mail: sales@flender.be

BULGARIA

A. Friedr. Flender AG
Branch Office
c/o Auto - Profi GmbH
Alabin Str. 52, 1000 Sofia
Phone: +359 (0) 2 - 9 80 66 06
Fax: +359 (0) 2 - 9 80 33 01
E-mail: sofia@auto-profi.com

CROATIA / SLOVENIA BOSNIA-HERZEGOVINA

A. Friedr. Flender AG
Branch Office
c/o HUM - Naklada d.o.o.
Mandroviceva 3, 10000 Zagreb
Phone: +385 (0) 1 - 2 30 60 25
Fax: +385 (0) 1 - 2 30 60 24
E-mail: flender@hi.hinet.hr

CZECH REPUBLIC

A. Friedr. Flender AG
Branch Office
Hotel DUO, Teplicka 17
19000 Praha 9
Phone: +420 (0) 2 - 83 88 23 00
Fax: +420 (0) 2 - 83 88 22 05
E-mail: flender_pumprla@hotelduo.cz

DENMARK

Flender Scandinavia A/S
Rugmarken 35 B, 3520 Farum
Phone: +45 - 70 22 60 03
Fax: +45 - 44 99 16 62
E-mail: kontakt@flenderscandinavia.com
www.flenderscandinavia.com

ESTHONIA / LATVIA / LITHUANIA

Flender Branch Office
Addinol Mineralöl Marketing OÜ
Suur-Sõjamäe 32
11415 Tallinn / Esthonia
Phone: +372 (0) 6 - 27 99 99
Fax: +372 (0) 6 - 27 99 90
E-mail: flender@addinol.ee
www.addinol.ee

FINLAND

Flender Oy
Ruosilantie 2 B, 00390 Helsinki
Phone: +358 (0) 9 - 4 77 84 10
Fax: +358 (0) 9 - 4 36 14 10
E-mail: webmaster@flender.fi
www.flender.fi

FRANCE

Flender s.a.r.l.
3, rue Jean Monnet - B.P. 5
78996 Elancourt Cedex
Phone: +33 (0) 1 - 30 66 39 00
Fax: +33 (0) 1 - 30 66 35 13
E-mail: sales@flender.fr

SALES OFFICES:

Flender s.a.r.l.
36, rue Jean Broquin
69006 Lyon
Phone: +33 (0) 4 - 72 83 95 20
Fax: +33 (0) 4 - 72 83 95 39
E-mail: sales@flender.fr

Flender - Graffenstaden SA
1, rue du Vieux Moulin
67400 Illkirch-Graffenstaden
B.P. 84
67402 Illkirch - Graffenstaden
Phone: +33 (0) 3 - 88 67 60 00
Fax: +33 (0) 3 - 88 67 06 17
E-mail: flencomm@flender-graff.com

GREECE

Flender Hellas Ltd.
2, Delfon str., 11146 Athens
Phone: +30 210 - 2 91 72 80
Fax: +30 210 - 2 91 71 02
E-mail: flender@otenet.gr

Mangrinox S.A.
14, Grevenon str., 11855 Athens
Phone: +30 210 - 3 42 32 01
Fax: +30 210 - 3 45 99 28
E-mail: mangrinox@otenet.gr

HUNGARY

A. Friedr. Flender AG
Branch Office
Bécsi Út 3-5, 1023 Budapest
Phone: +36 (0) 1 - 3 45 07 90 / 91
Fax: +36 (0) 1 - 3 45 07 92
E-mail: jambor.laszlo@axelero.hu

ITALY

Flender Cigala S.p.A.
Parco Tecnologico Manzoni
Palazzina G
Viale delle industrie, 17
20040 Caponago (MI)
Phone: +39 (0) 02 - 95 96 31
Fax: +39 (0) 02 - 95 74 39 30
E-mail: info@flendercigala.it

THE NETHERLANDS

Flender Nederland B.V.
Industrieterrein Lansinghage
Platinastraat 133
2718 ST Zoetermeer
Postbus 725
2700 AS Zoetermeer
Phone: +31 (0) 79 - 3 61 54 70
Fax: +31 (0) 79 - 3 61 54 69
E-mail: sales@flender.nl
www.flender.nl

SALES OFFICES:
Flender Nederland B.V.
Lage Brink 5-7
7317 BD Apeldoorn
Postbus 1073
7301 BH Apeldoorn
Phone: +31 (0) 55 - 5 27 50 00
Fax: +31 (0) 55 - 5 21 80 11
E-mail: tom.alberts@flender-group.com

Bruinhof B.V.
Boterdiep 37
3077 AW Rotterdam
Postbus 9607
3007 AP Rotterdam
Phone: +31 (0) 10 - 4 97 08 08
Fax: +31 (0) 10 - 4 82 43 50
E-mail: info@bruinhof.nl
www.bruinhof.nl

NORWAY

Elektroprosess AS
Frysjaeveien 40, 0884 Oslo
Postboks 165, Kjelsås
0411 Oslo
Phone: +47 (0) 2 - 2 02 10 30
Fax: +47 (0) 2 - 2 02 10 50 / 51
E-mail: post@elektroprosess.no

POLAND

A. Friedr. Flender AG
Branch Office
Przedstawicielstwo w Polsce
ul. Wyzwolenia 27
43 - 190 Mikołów
Phone: +48 (0) 32 - 2 26 45 61
Fax: +48 (0) 32 - 2 26 45 62
E-mail: flender@pro.onet.pl
www.flender.pl

PORTUGAL

Rodamientos FEYC, S.A.
R. Jaime Lopes Dias, 1668 CV
1750 - 124 Lissabon
Phone: +351 (0) 21 - 7 54 24 10
Fax: +351 (0) 21 - 7 54 24 19
E-mail: info@rportugal.com

ROMANIA

A. Friedr. Flender AG
Branch Office
98 - 106, Soseaua Mihai Bravu
Sector 2, Bloc D 16, Sc 1, Apartament 4
021331 Bucuresti - 2
Phone: +40 (0) 21 - 4 91 10 08
Fax: +40 (0) 21 - 4 91 10 08
E-mail: flender@fx.ro

RUSSIA

F & F GmbH
Tjuschina 4-6
191119 St. Petersburg
Phone: +7 (0) 8 12 - 3 20 90 34
Fax: +7 (0) 8 12 - 3 40 27 60
E-mail: flendergus@mail.spbnit.ru

SLOVAKIA

A. Friedr. Flender AG
Branch Office
Vajanského 49
P.O. Box 286, 08001 Presov
Phone: +421 (0) 51 - 7 70 32 67
Fax: +421 (0) 51 - 7 70 32 67
E-mail: micenko.flender@nexttra.sk

SPAIN

Flender Ibérica S.A.
Poligono Industrial San Marcos
Calle Morse, 31 (Parcela D-15)
28906 Getafe - Madrid
Phone: +34 (0) 91 - 6 83 61 86
Fax: +34 (0) 91 - 6 83 46 50
E-mail: f-iberica@flender.es
www.flender.es

SWEDEN

Flender Scandinavia
Åsensvägen 2
44339 Lerum
Phone: +46 (0) 302 - 1 25 90
Fax: +46 (0) 302 - 1 25 56
E-mail: kontakt@flenderscandinavia.com
www.flenderscandinavia.com

SWITZERLAND

Flender AG
Zeughausstr. 48
5600 Lenzburg
Phone: +41 (0) 62 8 85 76 00
Fax: +41 (0) 62 8 85 76 76
E-mail: info@flender.ch
www.flender.ch

TURKEY

Flender Güç Aktarma Sistemleri
Sanayi ve Ticaret Ltd. Sti.
IMES Sanayi, Sitesi
E Blok 502, Sokak No. 22
81260 Dudullu - Istanbul
Phone: +90 (0) 2 16 - 4 66 51 41
Fax: +90 (0) 2 16 3 64 59 13
E-mail: cuzkan@flendertr.com
www.flendertr.com

UKRAINE

A. Friedr. Flender AG
Branch Office, c/o DIV - Deutsche Industrie-
vertretung, Prospect Pobedy 44
252057 Kiev
Phone: +380 (0) 44 - 4 46 80 49
Fax: +380 (0) 44 - 2 30 29 30
E-mail: flender@div.kiev.ua

UNITED KINGDOM & EIRE

Flender Power Transmission Ltd.
Thornbury Works, Leeds Road
Bradford
West Yorkshire BD3 7EB
Phone: +44 (0) 12 74 65 77 00
Fax: +44 (0) 12 74 66 98 36
E-mail: flenders@flender-power.co.uk
www.flender-power.co.uk

SERBIA-MONTENEGRO ALBANIA / MACEDONIA

A. Friedr. Flender AG
Branch Office
c/o G.P.Inzenjering d.o.o.
III Bulevar 54 / 19
11070 Novi Beograd
Phone: +381 (0) 11 - 60 44 73
Fax: +381 (0) 11 - 3 11 67 91
E-mail: flender@eunet.yu

AFRICA

NORTH AFRICAN COUNTRIES

Please refer to Flender s.a.r.l.
3, rue Jean Monnet - B.P. 5
78996 Elancourt Cedex
Phone: +33 (0) 1 - 30 66 39 00
Fax: +33 (0) 1 - 30 66 35 13
E-mail: sales@flender.fr

EGYPT

Sons of Farid Hassanen
81 Matbaa Ahlia Street
Boulac 11221, Cairo
Phone: +20 (0) 2 - 5 75 15 44
Fax: +20 (0) 2 - 5 75 17 02
E-mail: hussein@sonfarid.com

SOUTH AFRICA

Flender Power Transmission (Pty.) Ltd.
Cnr. Furnace St & Quality Rd.
P.O. Box 131, Isando 1600
Johannesburg
Phone: +27 (0) 11 - 5 71 20 00
Fax: +27 (0) 11 - 3 92 24 34
E-mail: sales@flender.co.za
www.flender.co.za

SALES OFFICES:
Flender Power Transmission (Pty.) Ltd.
Unit 3 Marconi Park
9 Marconi Crescent, Montague Gardens
P.O. Box 37291
Chempet 7442, Cape Town
Phone: +27 (0) 21 - 5 51 50 03
Fax: +27 (0) 21 - 5 52 38 24
E-mail: sales@flender.co.za

Flender Power Transmission (Pty.) Ltd.
Unit 3 Goshawk Park
Falcon Industrial Estate
P.O. Box 1608
New Germany 3620, Durban
Phone: +27 (0) 31 - 7 05 38 92
Fax: +27 (0) 31 - 7 05 38 72
E-mail: sales@flender.co.za

Flender Power Transmission (Pty.) Ltd.
9 Industrial Crescent, Ext. 25
P.O. Box 17609, Witbank 1035
Phone: +27 (0) 13 - 6 92 34 38
Fax: +27 (0) 13 - 6 92 34 52
E-mail: sales@flender.co.za

Flender Power Transmission (Pty.) Ltd.
Unit 14 King Fisher Park, Alton
Cnr. Ceramic Curve & Alumina Allee
P.O. Box 101995
Meerensee 3901, Richards Bay
Phone: +27 (0) 35 - 7 51 15 63
Fax: +27 (0) 35 - 7 51 15 64
E-mail: sales@flender.co.za

AMERICA

ARGENTINA

Chilicote S.A.
Avda. Julio A. Roca 546
C 1067 ABN Buenos Aires
Phone: +54 (0) 11 - 43 31 66 10
Fax: +54 (0) 11 - 43 31 42 78
E-mail: chilicote@chilicote.com.ar

BRASIL

Flender Brasil Ltda.
Rua Quatorze, 60 - Cidade Industrial
32211 - 970, Contagem - MG
Phone: +55 (0) 31 - 33 69 21 00
Fax: +55 (0) 31 - 33 69 21 66
E-mail: vendas@flenderbrasil.com

SALES OFFICES:

Flender Brasil Ltda.
Rua James Watt, 142
conj. 142 - Brooklin Novo
04576 - 050, São Paulo - SP
Phone: +55 (0) 11 - 55 05 99 33
Fax: +55 (0) 11 - 55 05 30 10
E-mail: flesao@uol.com.br

Flender Brasil Ltda.
Rua Campos Salles, 1095
sala 04 - Centro 14015 - 110,
Ribeirão Preto - SP
Phone: +55 (0) 16 - 6 35 15 90
Fax: +55 (0) 16 - 6 35 11 05
E-mail: flender.ribpreto@uol.com.br

CANADA

Flender Power Transmission Inc.
215 Shields Court, Units 4 - 6
Markham, Ontario L3R 8V2
Phone: +1 (0) 9 05 - 3 05 10 21
Fax: +1 (0) 9 05 - 3 05 10 23
E-mail: flender@ca.inter.net
www.flenderpti.com

SALES OFFICE:

Flender Power Transmission Inc.
34992 Bemina Court
Abbotsford - Vancouver
B.C. V3G 1C2
Phone: +1 (0) 6 04 - 8 59 66 75
Fax: +1 (0) 6 04 - 8 59 68 78
E-mail: tvickers@rapidnet.net

CHILE / ARGENTINA / BOLIVIA ECUADOR / PARAGUAY / URUGUAY

Flender Cono Sur Limitada
Avda. Galvarino Gallardo 1534
Providencia, Santiago
Phone: +56 (0) 2 - 2 35 32 49
Fax: +56 (0) 2 - 2 64 20 25
E-mail: flender@flender.cl
www.flender.cl

COLOMBIA

A.G.P. Representaciones Ltda.
Flender Liaison Office Colombia
Av Boyaca No 23A
50 Bodega UA 7-1, Bogotá
Phone: +57 (0) 1 - 5 70 63 53
Fax: +57 (0) 1 - 5 70 73 35
E-mail: aguerrero@agp.com.co
www.agp.com.co

MEXICO

Flender de Mexico S.A. de C.V.
17, Pte. 713 Centro
72000 Puebla
Phone: +52 (0) 2 22 - 2 37 19 00
Fax: +52 (0) 2 22 - 2 37 11 33
E-mail: szugasti@flendermexico.com
www.flendermexico.com

SALES OFFICES:

Flender de Mexico S.A. de C.V.
Lago Nargis No. 38
Col. Granada,
11520 Mexico, D.F.
Phone: +52 (0) 55 - 52 54 30 37
Fax: +52 (0) 55 - 55 31 69 39
E-mail: info@flendermexico.com

Flender de Mexico S.A. de C.V.
Ave. San Pedro No. 231-5
Col. Miravalle
64660 Monterrey, N.L.
Phone: +52 (0) 81 - 83 63 82 82
Fax: +52 (0) 81 - 83 63 82 83
E-mail: info@flendermexico.com

PERU

Potencia Industrial E.I.R.L.
Calle Victor González Olaechea N° 110
Urb. La Aurora - Miraflores,
P.O.Box: Av. 2 de Mayo N° 679
Of.108-Miraflores
Casilla N° 392, Lima 18
Phone: +51 (0) 1 - 2 42 84 68
Fax: +51 (0) 1 - 2 42 08 62
E-mail: cesarzam@chavin.rcp.net.pe

USA

Flender Corporation
950 Tollgate Road
P.O. Box 1449, Elgin, IL. 60123
Phone: +1 (0) 8 47 - 9 31 19 90
Fax: +1 (0) 8 47 - 9 31 07 11
E-mail: flender@flenderusa.com
www.flenderusa.com

Flender Corporation
Service Centers West
4234 Foster Ave.
Bakersfield, CA. 93308
Phone: +1 (0) 6 61 - 3 25 44 78
Fax: +1 (0) 6 61 - 3 25 44 70
E-mail: flender1@lightspeed.net

VENEZUELA

F. H. Transmisiones S.A.
Urbanización Buena Vista
Calle Johan Schafer o Segunda Calle
Municipio Sucre, Petare
Caracas
Phone: +58 (0) 2 - 21 52 61
Fax: +58 (0) 2 - 21 18 38
E-mail: fhtransm@telcel.net.ve
www.fhtransmisiones.com

ASIA

BANGLADESH / SRI LANKA

Please refer to Flender Limited
No. 2 St. George's Gate Road
5th Floor, Hastings
Kolkata - 700 022
Phone: +91 (0) 33 - 2 23 05 45
Fax: +91 (0) 33 - 2 23 18 57
E-mail: flender@flenderindia.com

PEOPLE'S REPUBLIC OF CHINA

Flender Power Transmission
(Tianjin) Co. Ltd.
ShuangHu Rd.- Shuangchen Rd. West
Beichen Economic Development
Area (BEDA)
Tianjin 300400
Phone: +86 (0) 22 - 26 97 20 63
Fax: +86 (0) 22 - 26 97 20 61
E-mail: flender@flendertj.com
www.flendertj.com
Flender Power Transmission
(Tianjin) Co. Ltd.
Beijing Office
C-415, Lufthansa Center
50 Liangmaqiao Road, Chaoyang District
Beijing 100016
Phone: +86 (0) 10 - 64 62 21 51
Fax: +86 (0) 10 - 64 62 21 43
E-mail: beijing@flenderprc.com.cn
Flender Power Transmission
(Tianjin) Co. Ltd.
Shanghai Office
1101-1102 Harbour Ring Plaza
18 Xizang Zhong Rd.
Shanghai 200 001
Phone: +86 (0) 21 - 53 85 31 48
Fax: +86 (0) 21 - 53 85 31 46
E-mail: shanghai@flenderprc.com.cn

Flender Power Transmission
(Tianjin) Co. Ltd.
Wuhan Office
Rm. 1503, Jianyin Building,
709 Jianshedao
Wuhan 430 015
Phone: +86 (0) 27 - 85 48 67 15
Fax: +86 (0) 27 - 85 48 68 36
E-mail: wuhan@flenderprc.com.cn

Flender Power Transmission
(Tianjin) Co. Ltd.
Guangzhou Office
Rm. 2802, Guangzhou International
Electronics Tower
403 Huanshi Rd. East
Guangzhou 510 095
Phone: +86 (0) 20 - 87 32 60 42
Fax: +86 (0) 20 - 87 32 60 45
E-mail: guangzhou@flenderprc.com.cn

Flender Power Transmission
(Tianjin) Co. Ltd.
Chengdu Office
G-6 / F Guoxin Mansion,
77 Xiyu Street
Chengdu 610 015
Phone: +86 (0) 28 - 86 19 83 72
Fax: +86 (0) 28 - 86 19 88 10
E-mail: chengdu@flenderprc.com.cn

FLENDER

Flender Power Transmission
(Tianjin) Co. Ltd.
Shenyang Office
Rm. 2-163, Tower I, City Plaza Shenyang
206 Nanjing Street (N), Heping District
Shenyang 110 001
Phone: +86 (0) 24 - 23 34 20 48
Fax: +86 (0) 24 - 23 34 20 46
E-mail: shenyang@flenderprc.com.cn

Flender Power Transmission
(Tianjin) Co. Ltd.
Xi'an Office
Rm. 302, Shaanzi Zhong Da
International Mansion
30 Southern Rd.
Xi'an 710 002
Phone: +86 (0) 29 - 7 20 32 68
Fax: +86 (0) 29 - 7 20 32 04
E-mail: xian@flenderprc.com.cn

INDIA

Flender Limited
Head Office:
No. 2 St. George's Gate Road
5th Floor, Hastings
Kolkata - 700 022
Phone: +91 (0) 33 - 22 23 05 45
Fax: +91 (0) 33 - 22 23 08 30
E-mail: flender@flenderindia.com

Flender Limited
Industrial Growth Centre
Rakhajungle, Nimpura
Kharagpur - 721 302
Phone: +91 (0) 3222 - 23 33 07
Fax: +91 (0) 3222 - 23 33 64
E-mail: works@flenderindia.com

SALES OFFICES:
Flender Limited
Eastern Regional Sales Office
No. 2 St. George's Gate Road
5th Floor, Hastings
Kolkata - 700 022
Phone: +91 (0) 33 - 22 23 05 45
Fax: +91 (0) 33 - 22 23 08 30
E-mail: ero@flenderindia.com

Flender Limited
Western Regional Sales Office
Plot No. 23, Sector 19 - C
Vashi, Navi Mumbai - 400 705
Phone: +91 (0) 22 - 27 65 72 27
Fax: +91 (0) 22 - 27 65 72 28
E-mail: wro@flenderindia.com

Flender Limited
Southern Regional Sales Office
41 Nelson Manickam Road
Aminjikarai,
Chennai - 600 029
Phone: +91 (0) 44 - 23 74 39 21
Fax: +91 (0) 44 - 23 74 39 19
E-mail: sro@flenderindia.com

Flender Limited
Northern Regional Sales Office
209-A, Masjid Moth, 2nd Floor
(Behind South Extension II)
New Delhi - 110 049
Phone: +91 (0) 11 - 26 25 02 21
Fax: +91 (0) 11 - 26 25 63 72
E-mail: nro@flenderindia.com

INDONESIA

Flender Singapore Pte. Ltd.
Representative Office
Perkantoran Puri Niaga II
Jalan Puri Kencana Blok J1
No. 2i, Kembangan
Jakarta Barat 11610
Phone: +62 (0) 21 - 5 82 86 24
Fax: +62 (0) 21 - 5 82 86 23
E-mail: bobwall@cbn.net.id

IRAN

Cimaghand Co. Ltd.
P.O. Box 15745-493
No. 13, 16th East Street
Beyhaghi Ave., Argentina Sq.
Tehran 15156
Phone: +98 (0) 21 - 8 73 02 14
Fax: +98 (0) 21 - 8 73 39 70
E-mail: info@cimaghand.com

ISRAEL

Greenshpon Engineering Works Ltd.
Haamelim Street 20
P.O. Box 10108, 26110 Haifa
Phone: +972 (0) 4 - 8 72 11 87
Fax: +972 (0) 4 - 8 72 62 31
E-mail: sales@greenshpon.com
www.greenshpon.com

JAPAN

Flender Japan Co., Ltd.
WBG Marive East 21F
Nakasa 2 - 6
Mihama-ku, Chiba-shi
Chiba 261-7121
Phone: +81 (0) 43 - 2 13 39 30
Fax: +81 (0) 43 - 2 13 39 55
E-mail: contact@flender-japan.com

KOREA

Flender Ltd.
7th Fl. Dorim Bldg.
1823 Bangbae-Dong, Seocho-Ku,
Seoul 137-060
Phone: +82 (0) 2 - 34 78 63 37
Fax: +82 (0) 2 - 34 78 63 45
E-mail: flender@unitel.co.kr

KUWAIT

South Gulf Company
Al-Reqai, Plot 1, Block 96
P.O. Box 26229, Safat 13123
Phone: +965 (0) - 4 88 39 15
Fax: +965 (0) - 4 88 39 14
E-mail: adelameen@hotmail.com

LEBANON

Gabriel Acar & Fils s.a.r.l.
Dahr-el-Jamal
Zone Industrielle, Sin-el-Fil
B.P. 80484, Beyrouth
Phone: +961 (0) 1 - 49 82 72
Fax: +961 (0) 1 - 49 49 71
E-mail: gacar@beirut.com

MALAYSIA

Flender Singapore Pte. Ltd.
Representative Office
37 A - 2, Jalan PJU 1/39
Dataran Prima
47301 Petaling Jaya
Selangor Darul Ehsan
Phone: +60 (0) 3 - 78 80 42 63
Fax: +60 (0) 3 - 78 80 42 73
E-mail: flender@tm.net.my

PAKISTAN

Please refer to
A. Friedr. Flender AG
46393 Bocholt
Phone: +49 (0) 28 71 - 92 22 59
Fax: +49 (0) 28 71 - 92 15 16
E-mail: ludger.wittag@flender.com

PHILIPPINES

Flender Singapore Pte. Ltd.
Representative Office
28/F, Unit 2814
The Enterprise Centre
6766 Ayala Avenue corner
Paeso de Roxas, Makati City
Phone: +63 (0) 2 - 8 49 39 93
Fax: +63 (0) 2 - 8 49 39 17
E-mail: roman@flender.com.ph

BAHRAIN / IRAQ / JORDAN / LYBIA OMAN / QATAR / U.A.E. / YEMEN

Please refer to A. Friedr. Flender AG
Middle East Sales Office
IMES Sanayi Sitesi
E Blok 502, Sokak No. 22
81260 Dudullu - Istanbul
Phone: +90 (0) 2 16 - 4 99 66 23
Fax: +90 (0) 2 16 - 3 64 59 13
E-mail: meso@flendertr.com

SAUDI ARABIA

South Gulf Co.
Al-Khobar, Dahrhan Str.
Middle East Trade Center
3rd floor, Flat # 23
P.O. Box 20434 31952 Al-Khobar
Phone: +966 (0) 3 - 8 87 53 32
Fax: +966 (0) 3 - 8 87 53 31
E-mail: adelameen@hotmail.com

SINGAPORE

Flender Singapore Pte. Ltd.
13 A, Tech Park Crescent
Singapore 637843
Phone: +65 (0) - 68 97 94 66
Fax: +65 (0) - 68 97 94 11
E-mail: flender@singnet.com.sg
www.flender.com.sg

SYRIA

Misrabi Co & Trading
Mezzeh Autostrade Transportation
Building 4/A, 5th Floor
P.O. Box 12450, Damascus
Phone: +963 (0) 11 - 6 11 67 94
Fax: +963 (0) 11 - 6 11 09 08
E-mail: ismael.misrabi@gmx.net

TAIWAN

A. Friedr. Flender AG
Taiwan Branch Company
1F, No. 5, Lane 240
Nan Yang Street, Hsichih
Taipei Hsien 221
Phone: +886 (0) 2 - 26 93 24 41
Fax: +886 (0) 2 - 26 94 36 11
E-mail: flender_tw@flender.com.tw

THAILAND

Flender Singapore Pte. Ltd.
Representative Office
23/F M Thai Tower, All Seasons Place
87 Wireless Road, Phatumwan
Bangkok 10330
Phone: +66 (0) 2 - 6 27 91 09
Fax: +66 (0) 2 - 6 27 90 01
E-mail: christian.beckers@flender.th.com

VIETNAM

Flender Singapore Pte. Ltd.
Representative Office
Suite 6/6A, 16F Saigon Tower
29 Le Duan Street, District 1
Ho Chi Minh City, Vietnam
Phone: +84 (0) 8 - 8 23 62 97
Fax: +84 (0) 8 - 8 23 62 88
E-mail: flender@hcm.vnn.vn

AUSTRALIA

Flender (Australia) Pty. Ltd.
9 Nello Place, P.O. Box 6047
Wetherill Park
N.S.W. 2164, Sydney
Phone: +61 (0) 2 - 97 56 23 22
Fax: +61 (0) 2 - 97 56 48 92, 97 56 14 92
E-mail: sales@flender.com.au
www.flender.com.au

SALES OFFICES:
Flender (Australia) Pty. Ltd.
Suite 3, 261 Centre Rd.
Bentleigh, VIC 3204 Melbourne
Phone: +61 (0) 3 - 95 57 08 11
Fax: +61 (0) 3 - 95 57 08 22
E-mail: sales@flender.com.au

Flender (Australia) Pty. Ltd.
Suite 5, 1407 Logan Rd.
Mt. Gravatt
QLD 4122, Brisbane
Phone: +61 (0) 7 - 34 22 23 89
Fax: +61 (0) 7 - 34 22 24 03
E-mail: sales@flender.com.au

Flender (Australia) Pty. Ltd.
Suite 2 403 Great Eastern Highway
W.A. 6104, Redcliffe - Perth
Phone: +61 (0) 8 - 94 77 41 66
Fax: +61 (0) 8 - 94 77 65 11
E-mail: sales@flender.com.au

NEW ZEALAND

Please refer to Flender (Australia) Pty. Ltd.
9 Nello Place, P.O. Box 6047
Wetherill Park
N.S.W. 2164, Sydney
Phone: +61 (0) 2 - 97 56 23 22
Fax: +61 (0) 2 - 97 56 48 92
E-mail: sales@flender.com.au

12. Declaration by the manufacturer

Declaration by the manufacturer

in accordance with EC Engineering Guideline 98/37/EC, Appendix II B

We hereby declare that the

**Flexible RUPEX couplings,
type RWN, RWS and RWB, RBS**

described in these Operating Instructions are intended for incorporation in a machine, and that it is prohibited to put them into service before verifying that the machine into which they are incorporated complies with the EC Guidelines (original edition 98/37/EC including any subsequent amendments thereto).

This Manufacturer's Declaration takes into account all the unified standards (inasmuch as they apply to our products) published by the European Commission in the Official Journal of the European Community.



Bocholt, 1998-08-24

Signature (person responsible for products)